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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,737	12/29/2000	Yale Zhang		7214

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EXAMINER

CURS, NATHAN M

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 10/22/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/750,737

Applicant(s)

ZHANG ET AL.

Examiner

Nathan Curs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the use of the legal phraseology "said first R-channel" and "said second R-channel" (page 13, line 8). Correction is required.
See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities: "guide" should be "guiding" (page 3, line 5); "thesecond" should be "the second" (page 3, line 12).

Appropriate correction is required.

Claim Objections

4. Claim 3 is objected to because of the following informalities: "GIN" should be "GRIN" (page 8, line 12). Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 10 recites the limitation "said prism" (page 9, line 6). There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1, 2, 8-11, and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Cai et al. (US Patent No. 6219474).

Regarding claim 1, Cai et al. disclose a switchable optical add/drop device comprising: a DWDM R-channel assembly, a collimator assembly, and a switching device removably positioned therebetween so as to optionally perform a by-pass mode or an add/drop function (fig. 3 and fig. 6; and col. 3, lines 20-52; and col. 6, lines 7-16).

Regarding claim 2, Cai et al. disclose that said R-channel assembly includes first and second R-channels spatially opposite to each other (fig. 3).

Regarding claim 8, Cai et al. disclose that the collimator assembly includes first and second collimators respectively defining ADD and DROP ports (fig. 3 and fig. 5).

Regarding claim 9, Cai et al. disclose that said switching device is a prism (col. 5, lines 21-26).

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Regarding claim 10, Cai et al. disclose that a prism blocks signal ways of the R-channel assembly and of the collimator assembly and forms the switchable paths therein for switching (fig. 5 and col. 5, lines 21-26).

Regarding claim 11, Cai et al. disclose a switchable optical add/drop device comprising: first and second DWDM R-channels functioning as IN and OUT ports, respectively (fig. 3; and col. 3, lines 20-52); first and second collimators functioning as ADD and DROP ports, respectively (fig. 5); and a switching device removably disposed among said first and second R-channels and said first and second collimators so that the device functions as a switchable add/drop device with existence of the switching device while functions as a by-pass mode with removal of said switching device (col. 5, lines 21-26; fig. 6, and col. 6, lines 7-16).

Regarding claim 13, Cai et al. disclose that said first R-channel and said first collimator are arranged on one side of said switching device, and the second R-channel and said second collimator are arranged on the other side of said switching device (fig. 3 and fig. 5).

Regarding claim 14, Cai et al. disclose that said switching device is a prism (col. 5, lines 21-26).

Regarding claim 15, Cai et al. disclose a method of optionally switchably adding/dropping channels of a signal, comprising the steps of (1) providing first and second R-channels spatially opposite to each other (fig. 3; and col. 3, lines 20-52), said first R-channel defining an IN port and said second R-channel defining an OUT port (fig. 3); (2) defining a first path between two near ends of said first and second R-channels, and a second path between two far ends of said first and second R-channels (fig. 3), (3) providing first and second collimators with ADD and DROP ports, respectively (fig. 3 and fig. 5); and (4) removably positioning a switching device among said first and second R-channels and said first and second collimators for blocking the

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first path as a switchable optical add/drop device or for not block the first path as a by-pass mode (fig. 3; col. 5, lines 21-26; fig. 6, and col. 6, lines 7-16).

Regarding claim 16, Cai et al. disclose that said switching device defines two switching paths respectively guiding a filtered wavelength channel from the first path and an added wavelength channel from the first collimator (fig. 3; fig. 5; and col. 3, lines 20-52).

Regarding claim 17, Cai et al. disclose that said first and second R-channels are substantially structurally the same with the same filter thereof for the same specific wavelength channel (col. 3, lines 43-46).

Regarding claims 18 and 20, Cai et al. disclose an arrangement of switchably adding/dropping wavelength channels with regard to a multiplex signal (col. 1, line 58 to col. 2, line 10), comprising: a first path for transmitting a specific wavelength channel and a second path for transmitting the rest of the wavelength channels in said multiplex signal and directing to an OUT port (fig. 3 and col. 3, lines 20-29); a third path for either switching, using a switching device, the filtered specific wavelength channel in the first path to a DROP port or adding the specific wavelength channel from an ADD port to the first path (fig. 3 and fig. 5; and col. 5, lines 21-26).

Regarding claim 19, Cai et al. disclose that said first path is defined between two near ends of first and second R-channels, and said second path is defined between two far ends of said first and second R-channels (fig. 3).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3-7, 12, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cai et al. (US Patent No. 6219474) in view of Xu et al. (US Patent No. 5796889).

Regarding claim 3, Cai et al. disclose that the first R-channel includes a first DWDM filter, and a first fiber connected to an IN port of said first R-channel, and the second R-channel includes a second DWDM filter, and a second fiber connected to an OUT port of said second R-channel (fig. 3, and col. 3, lines 20-52). Cai et al. do not disclose that the R-channels include a GRIN lens. Xu et al. disclose a high-performance, low insertion loss WDM coupler (abstract and col. 1, lines 11-15) used as an add/drop filter, with a bandpass filter and a collimating GRIN lens, that accepts a multiwavelength signal input on one fiber and passes one wavelength to a second fiber while reflecting the remaining wavelengths to a third fiber (col. 4, lines 23-42). It would have been obvious to an artisan at the time of the invention to use the WDM coupler disclosed by Xu et al. for the WDM filters of Cai et al. for high performance and low insertion loss.

Regarding claim 4, Cai et al. disclose that said first R-channel and said second R-channel are structurally the same (col. 3, lines 43-46).

Regarding claim 5, Cai et al. disclose that said first R-channel and said second R-channel are face to face disposed with each other with said first filter and said second filter confronting each other (fig. 3)

Regarding claim 6, Cai et al. disclose that a first path is defined between the first filter and the second filter for passage of the filtered wavelength channel (fig. 3).

Regarding claim 7, Cai et al. disclose that a second path is defined between said first R-channel and said second R-channel, said second path being connected to the first R-channel on

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the same side of the IN port and to the second R-channel on the same side of the OUT port (fig. 3).

Regarding claim 12, Cai et al. disclose that said first and second DWDM R-channels are substantially structurally the same with each other each with a DWDM filter for the same specific wavelength channel (col. 3, lines 43-46). Cai et al. do not disclose that said first and second R-channels have a GRIN lens for the same specific wavelength channel. Xu et al. disclose a high-performance, low insertion loss WDM coupler (abstract and col. 1, lines 11-15) used as an add/drop filter, with a bandpass filter and a collimating GRIN lens, that accepts a multiwavelength signal input on one fiber and passes one wavelength to a second fiber while reflecting the remaining wavelengths to a third fiber (col. 4, lines 23-42). It would have been obvious to an artisan at the time of the invention to use two identical WDM couplers of the type disclosed by Xu et al. for each of the WDM filters of Cai et al. for high performance, low insertion loss, and matched wavelength filtering.

Regarding claim 21, Cai et al. disclose a subassembly of a switchable optical add/drop device comprising: a first R-channel including a first DWDM filter; a first fiber connected to the first DWDM filter and functioning as an IN port; a second R-channel and a second DWDM filter; a second fiber connected to the second DWDM filter and functioning as an OUT port; said first R-channel and said second R-channel being face to face disposed with each other with the first filter and the second filter confronting each other; a first path defined between the first filter and the second filter; and a second path defined between the first filter and the second filter around the IN and OUT ports (fig. 3 and col. 3, lines 20-52); whereby said subassembly may cooperate with a removable switching device to switchably add/drop the specific wavelength channel or perform a by-pass mode (fig. 6, col. 6, lines 7-16). Cai et al. do not disclose that the R-channels include GRIN lenses and do not disclose minimum insertion loss. Xu et al. disclose a high-

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performance, low insertion loss WDM coupler (abstract and col. 1, lines 11-15) used as an add/drop filter, with a bandpass filter and a collimating GRIN lens, that accepts a multiwavelength signal input on one fiber and passes one wavelength to a second fiber while reflecting the remaining wavelengths to a third fiber (col. 4, lines 23-42). It would have been obvious to an artisan at the time of the invention to use two identical WDM couplers of the type disclosed by Xu et al. for each of the WDM filters of Cai et al. for high performance, minimum insertion loss, and matched wavelength filtering.

Regarding claims 22 and 23, Cai et al. disclose that said first filter and R-channel and said second filter and R-channel are the same (fig. 3 and col. 3, lines 43-46).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- US Patent No. 6198857 – Note an add/drop device for WDM communication comprising: filter and collimator elements for adding and drop one channel from a multi-channel multiplexed signal, where two filter elements are substantially the same (fig. 3A and col. 6, line 65 to col. 7, line 56).

12. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (703) 305-0370. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of

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a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



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